REMARKS

This response is submitted in response to the Office Action mailed April 21, 2011.

Various claims have been amended. Support for the foregoing amendments may be found for example, at paragraphs 0009-0013, 0052, and 0056 of the specification. Presently pending are claims 1-38.

Specification Objections

The Examiner objected to the Abstract. Accordingly, the Abstract has been amended to address the Examiner's objection. Reconsideration and withdrawal of the objection is requested.

Further, the Examiner objected to the specification on grounds that 0023, 0024, 0028, 0029, 0031, and 0034 paragraphs refer to "Fig. 26," which does not exist.

Applicants respectfully note that these paragraphs should recite "figure 26," referring to the feature of "figure," as described in the specification. The specification, **as filed,** does not include those errors. Rather, these errors appear only in the application as PUBLISHED by the USPTO. Thus, apparently, these errors were introduced into Applicant's specification during publication by the Office.

Applicants respectfully request the Examiner to instruct the Office to make appropriate corrections in the paragraphs noted by the Examiner, prior to issuance of any patent from the instant application.

Drawing Amendments

The "memory" element shown in Figure 1 is referred to by the same reference numeral "26" as the element of a "figure." Applicants have amended Figure 1 to change the reference numeral to "25" to avoid confusion with "figure 26."

35 U.S.C. §112 Rejections

Claims 13 and 29 were rejected under 35 U.S.C. § 112, first paragraph, as non-enabled. Claim 13 and 29 have bee amended to address those rejections. Reconsideration is respectfully requested in light of the amendments to claims 13 and 29.

35 U.S.C. §103 Rejections

Claims 1-38 are patentable over Miyano (US Patent No. 6,480,807) in view of Counstantoudis et al., "Quantification of Line-edge Roughness of Photoresists," JVST, April 25, 2003).

Applicants respectfully traverse the rejections. Claim 1, as amended above, recites a method for evaluating a feature, comprising: (i) receiving an image of the feature, (ii) determining respective coordinates of a plurality of points on an edge of the feature in the image, (iii) fitting a figure having a non-circular and non-linear shape to the plurality of points, (iii) thereafter determining respective distances between the plurality of points and the figure having the non-circular and non-linear shape, and (iv) computing a roughness parameter for the feature using the respective distances.

At a minimum, the cited combination fails to disclose of fairly disclose the claimed features of "determining respective distances between the plurality of points and the figure having the non-circular *and* *non-linear* shape," as well as then using those respective distances for further computations (e.g., of a roughness parameter) or analysis, as recited in various ways in at least each of the independnet claims.

Miyano relates to a micropattern measuring method. In Milano, for example, an image of a pattern is acquired, a figure reflecting a shape of the micropattern is created, and pattern edge coordinates are detected from a density distribution data acquired on a straight line perpendicular to a tangential line of an outline of the figure. See, e.g., Abstract.

Whatever else Milano may disclose, the methods of Milano do not involve first fitting a figure having a non-circular and non-linear shape to the plurality of points, *and then further*, "determining respective distances between the plurality of points and the figure having the non-circular and non-linear" and using those distances for further operations, such a computation of a roughness parameter.

Indeed, in the Office Action, the Examiner looked to Constantoudis for the alleged disclosure of such features. Specifically, the Examiner cited to the portion of Constantoudis on page 1020.

At best, in connection with that portion, Constantoudis teaches:

"The most common way of studying the spatial distribution of roughness of an edge is by examining the correlations between the distances … *of the edge points from the linear fit of the edge at different positions* … where *N* is the total number of equidistant points on axis *y* along the edge … The height-height correlation function *G(r)* quantifies these correlations . . ." (Emphasis added).

Constantoudis then, further teaches for example, that *G(r)* is associated with autocorrelations function given by R(md), which uses a sigma value that is "the rms deviation of the *edge points* δ_i *from its* ***linear fit***." (Emphasis added).

Thus, at best, Constantoudis might be viewed as teaching the use of distances of edge points from the linear fit of the edge for evaluating roughness distribution. In contrast, the claimed invention calls for determining respective distances between a plurality of edge points and a fitted figure that has a non-circular *and* ***non-linear*** shape.

Given general knowledge of statistics, one skilled in the art would likely understand "linear fit" of an edge to merely refer to a line fit, such as a least-squares fit or the like, through a set of edge points. Aside from this, the disclosure of a distance of edge points to its "***linear*** fit" cannot be fairly viewed as teaching or even fairly suggesting determining any distance between edge points and a ***non-linear*** figure that is fitted to the points.

Because the cited combination fails to disclose or suggest all of the claimed features of any of independent claims 1, 16, 17, and 32-38, the claimed combination fails to render these claims obvious. Dependent claims are patentable over the cited combination for at least the same reasons as the independent claims.

Conclusion

For at least the foregoing reasons, the present claims are patentable over the cited references. If there are any additional fees due in connection with this communication, please charge Deposit Account No. 19-3140.

Respectfully submitted,

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